

AMENDMENT

Claim Amendments

1. (currently amended) A bi-directional ESD protection device, comprising
~~at least two~~ DIAC devices, each DIAC device comprising
a first and a second p-well ~~separated by~~ formed in an n-well the p-wells
~~and n-well~~ ~~n-well~~ being formed in a p-substrate and isolated ~~separated~~ from the
substrate by an n-isolation layer, wherein each of the first and second ~~each~~ p-well
has a p-buried layer formed under it and each p-well includes a p+ region and an
n+ region formed in it, the bi-directional ESD protection device further
comprising an additional p-region comprises a p+ ring formed in a p-well
surrounding each of the DIAC devices.
2. (previously presented) The device of claim 1, wherein the n+ regions in the two p-wells
face each other to define a p+, n+, n+, p+ configuration.
3. (canceled)
4. (canceled)
5. (currently amended) The device of claim 1 3, wherein said p+ region is connected to
ground.
6. (previously presented) The device of claim 1, wherein for each DIAC, the p+ and n+
regions in the first and second p-wells are connected together.
7. (previously presented) The device of claim 6, wherein the p+ and n+ regions in the first
and second p-wells are connected together by means of a first metal layer.
8. (previously presented) The device of claim 6, wherein the n+ and p+ regions in the first p-
well of the one DIAC are connected to an input pad.
9. (previously presented) The device of claim 7, wherein the n+ and p+ regions in the first p-
well of the one DIAC are connected to an input pad.
10. (previously presented) The device of claim 9, wherein the n+ and p+ regions in the first p-
well of the one DIAC are connected to the input pad by means of a second metal layer.

11. (previously presented) The device of claim 8, wherein the n⁺ and p⁺ regions in the second p-well of the other DIAC are connected to a ground pad.
12. (previously presented) The device of claim 11, wherein the n⁺ and p⁺ regions in the second p-well of the other DIAC are connected to the ground pad by means of a second metal layer.
13. (previously presented) The device of claim 10, wherein the n⁺ and p⁺ regions in the second p-well of the other DIAC are connected to a ground pad.
14. (previously presented) The device of claim 13, wherein the n⁺ and p⁺ regions in the second p-well of the other DIAC are connected to the ground pad by means of the second metal layer.
15. (previously presented) The device of claim 11, wherein the n⁺ and p⁺ regions of the second p-well of the first DIAC are connected to the n⁺ and p⁺ regions in the first p-well of the other DIAC.
16. (previously presented) The device of claim 14, wherein the n⁺ and p⁺ regions of the second p-well of the first DIAC are connected to the n⁺ and p⁺ regions in the first p-well of the other DIAC by means of the second metal layer.